

ABSTRACT

A heating element for heating liquids, comprising a heating coil coiled about a central axis. The coil has a first end and a second end lying in a plane substantially parallel to the central axis. The coil is covered with insulation which is covered with a protective sheath. The protective sheath is covered with an aluminum housing provided with a central aperture to increase the surface area of the heating element in contact with the liquid to improve start-up time. The aluminum housing is also provided with an aperture to receive a thermostat. A pressure die having a first portion and a second portion is adapted to receive a spacer between the first and second portions to vary the distance between the first and second portion and allow for the manufacture of heating elements of varying diameters.

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